

Amendments to the Claims:

Claim 1 (currently amended) ~~An article including a coupler comprising a core region disposed between two cladding regions, in which the core region receives light from at least one first device and outputs light to at least one second device, the core region having a grating formed in two dimensions so that light is output from the coupler in at least one discrete direction.~~

An article comprising an optical device and, optically coupled to the device, an optical coupler for receiving light input from the device and outputting light in at least one discrete direction wherein:

the optical coupler comprises a core region disposed between two cladding regions, the core region having a two-dimensional photonic crystal grating to output the light in the at least one direction.

Claim 2 (currently amended) The article of claim 1 in which the ~~at least one first~~ device is selected from the group consisting of a distributed feedback laser and a distributed Bragg reflector laser.

Claim 3 (currently amended) The article of claim 2 in which the device is an optical waveguide device and the coupler is integrated on the same waveguide as the ~~at least one first~~ device.

Claim 4 (original) The article of claim 1 in which one of the two cladding regions comprises air.

Claim 5 (original) The article of claim 1 in which one of the two cladding regions comprises SiO₂.

Claim 6 (original) The article of claim 1 in which the core region comprises an organic material.

Claim 7 (original) The article of claim 6 in which the core region comprises 8-hydroxyquinoline aluminum doped with a laser dye.

Claim 8 (original) The article of claim 1 in which the two-dimensional grating comprises a square or a triangular latticed grating.

Claim 9 (currently amended) The article of claim 8 ~~comprising~~ wherein the coupler is ensconced within at least two distributed Bragg reflector mirrors.

Claim 10 (currently amended) The article of claim 1 in which the ~~at least one first~~ device comprises a laser ~~plurality of lasers~~.

Claim 11 (currently amended) The article of claim 10 in which the laser is a waveguide laser and the coupler is integrated on the same substrate as the laser ~~plurality of lasers for emitting light to the coupler along a plurality of directions~~.

Claim 12 (original) The article of claim 1 in which the coupler is ensconced between two distributed Bragg reflector lasers.

Claim 13 (currently amended) The article of claim 1 in which the coupler is ensconced between a plurality of one-dimensional photonic crystal layers.

Claim 14 (currently amended) The article of claim 1 in which the device comprises a vertical cavity surface emitting laser.

Claim 15 (currently amended) The article of claim 1 in which the coupler directs the output light to second device comprises a planar waveguide.

Claim 16 (currently amended) The article of claim 1 in which the ~~at least one first~~ device is selected from lasers fabricated with InP, GaN, InGaN, AlGaIn, InGaAs, InGaAsP, GaAs, and AlGaAs.

Claim 17 (currently amended) The article of claim 1 in which the ~~first device~~ comprises a quantum cascade laser.

Claim 18 (original) An optical communications system comprising the article of claim 1.

Claim 19-20 (canceled)

Appl. No. 09/480,409
Reply to Office action of Oct. 27, 2003

Amendments to the Drawings:

Please correct the title of Fig. 6 to Fig. 6A.